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Imagery analysis report

Iraq/Iran Military Summary

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**Z-20032/81
IAR-0036/81
10 MARCH 1981
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IRAQ/IRAN MILITARY SUMMARY,

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1. (S/D) This report updates the most recent¹ in a series of imagery-derived reports on the Iraq/Iran conflict and covers the period from [] The report discusses deployed ground forces in the Khorramshahr/Abadan, Ahvaz, Dezful, Mandali, and Qasr-E Shirin forward areas. Related activity in Iraq included a high level of SAM and ECM air defense activity in Al Basrah, Baghdad, and Umm Qasr; camouflage of hardened aircraft bunkers at an airfield near Baghdad; the first deployment of operational aircraft to an auxiliary airfield in western Iraq; construction of earthen revetments (previously called berms) around two additional POL facilities; and continued construction of defensive earthen revetments at the Baghdad Nuclear Research Center. In Iran, activity included mobilization of additional ground forces units from Qazvin, the first identification of Rapier SAM sites in Manzariyeh, and additional damage to a refinery and POL storage facility in Abadan (Figure 1). Associated activity in Saudi Arabia included the observation of military shipments, probably bound for Iraq, at a port near Tuwwal.

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2. (S/D) Military unit designators and subordination (where used) are derived from collateral sources.² Acronyms and abbreviations are defined in a glossary at the end of the report. Additional reports will be issued as the situation changes.

GROUND FORCES ACTIVITY**Iraq/Iran Forward Areas****Khorramshahr/Abadan Area**

3. (S/D) Weather conditions in the Khuzestan area during the reporting period continued to limit coverage of the Khorramshahr/Abadan battle area (Figure 2). Portions of the FEBA observed during the reporting period apparently had not changed since the last coverage of [] Iraqi forces remained in control of Khorramshahr, north of the Karun River. Additional artillery damage to the bridge spanning the Karun River, linking Khorramshahr and Abadan, was discernible on [] However, the bridge still appeared to be functional. An Iraqi tank platoon (two tanks) remained deployed at the northwestern end of the bridge in Khorramshahr. On that date, elements of a tank battalion on tank transporters were observed north of Khorramshahr, traveling in convoy formation toward Ahvaz.

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4. (S/D) On [] Iraqi units also remained in two areas on the west bank of the Shatt Al Arab, opposite Abadan. Three mortar batteries were deployed 9 nm west-northwest of the city, and a 130mm field gun battery M-46 and two AA batteries were 6 nm southwest of Abadan.

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5. (S/D) Two additional Iraqi tank companies, one mechanized infantry platoon, and a heavy-lift transport unit were newly deployed approximately 9 nm northwest of Khorramshahr, along the Al Basrah/Khorramshahr road, between [] These units were deployed immediately southeast of and adjacent to previously reported engineer and supply and transport units.

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6. (S/D) On [] the Iraqi forces east of Abadan, discernible through the heavy clouds, included one tank company, one BMP-equipped mechanized infantry battalion, one BMP-equipped mechanized infantry company, and two AAA batteries. These forces were present in the same area on [] This area was not imaged on []

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7. (S/D) Iranian forces in the Abadan area appeared to have been reinforced between [] with additional reinforcements arriving by [] Newly deployed forces included three tank platoons, three mechanized infantry platoons, two infantry units, and one possible mortar battery. These units were positioned in earthen revetments northeast and east of Abadan, on the east bank of the Rudkhaneh-Ye Bahmanshir River. Iranian construction of new defensive revetments in this area was first observed on [] This activity continued on []

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8. (S/D) Previously reported Iranian units remained at Abadan on [] These forces included elements of a tank platoon in the northwestern portion of the city and an AAA battery deployed around Abadan International Airfield []

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Ahvaz Area

9. (S/D) Seasonal weather conditions limited the coverage of the Ahvaz area during the reporting period (Figure 3). No Iraqi forces were imaged. Iranian units deployed southwest of Ahvaz were imaged on partial coverage of [] These forces included two tank platoons (one newly deployed since [] two mechanized infantry companies, two 155mm M-109A1 SPG battalions, and one 155mm M-109A1 SPG battery. There was no coverage of the areas between Ahvaz and Susangerd or of the Susangerd area.

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Dezful Area

10. (S/D) Poor weather conditions also limited analysis of the Dezful battle area (Figure 4). Iraqi and Iranian units concentrated between 10 and 15 nm west of Dezful were partially imaged on [] These units appeared to have remained essentially unchanged since the last coverage of [] An Iraqi tank brigade and a mechanized infantry brigade remained deployed 13.5 nm west of Dezful. Elements of the Iraqi tank

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brigade previously reported west and northwest of Shush on [] were discernible through the heavy clouds on []. Additionally, new foxholes and trenches were observed on the hills adjacent to the west bank of the Karkheh River, opposite Shush.

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11. (S/D) Elements of two Iranian tank companies and two mechanized infantry platoons remained west of the Karkheh River on []. In addition, an Iranian tank company was still deployed on the east bank of the Karkheh River, northeast of Shush. Other Iranian force deployment areas in the vicinity were cloud covered.

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12. (S/D) In the area northeast and east of Dezful, 12 new Iranian infantry bivouac areas were observed on []. The largest bivouac area was just west of the intersection of the Rudkhaneh-Ye Gelal-E Tabiran and the Rudkhaneh-Ye Dez Rivers at 32-26-48N 048-29-50E, approximately 2 nm north of the occupied Dezful Hawk Site AO5-35 []. This area contained 172 small and three medium tents, as well as five trucks. Eleven smaller bivouac areas, containing from three to 20 small tents, were east, west, and south of the largest bivouac area.

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Mandali Area

13. (S/D) The Mandali area was observed through scattered clouds on [] (Figure 5). Elements of the Iraqi forces previously deployed northeast of Mandali on [] probably redeployed to areas southeast of the city. The FEBA remains unchanged.

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14. (S/D) Iraqi units deployed between 6 and 14 nm northeast of Mandali consisted of one tank company, one tank platoon, one probable mechanized mountain infantry company, two probable mechanized mountain infantry platoons, four FA batteries, and one AA battery. This area was previously occupied by a tank battalion, elements of a mechanized mountain infantry brigade, a mountain infantry brigade, and two FA battalions. A decrease in the number of tanks, APCs, and FA also appeared to have occurred in this area; however, terrain masking prevented a complete assessment of these forces. A small bridge spanning the Rudkhaneh-Ye Gangir River east of these forces had been destroyed since [].

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15. (S/D) Partial coverage of the area occupied by opposing Iranian forces, 20 nm northeast of Mandali, revealed that one mechanized infantry platoon and one FA battery were still in this area.

16. (S/D) Iraqi forces deployed within 5 nm of Mandali consisted of one tank platoon, two mechanized infantry platoons, two AA battalions, and a supply and transport unit. Only one FA battery and the supply and transport unit were present on []. The large amount of air defense near Mandali might indicate the presence of a command post.

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17. (S/D) Iraqi forces deployed 10 nm south and between 7 and 25 nm southeast of Mandali have been reinforced by elements of one probable mechanized mountain infantry battalion and elements of one FA battalion. Some of these units may have been previously deployed in the area northeast of the city where a reduction of Iraqi forces was observed. Iraqi forces observed on partial coverage of the areas south and southeast of Mandali consisted of three tank companies, three mechanized infantry/mechanized mountain infantry companies, one mechanized infantry/mechanized mountain infantry platoon, seven FA batteries, four AA batteries, and a supply and transport unit.

18. (S/D) The area where opposing Iranian forces were previously deployed southeast of Mandali was not imaged.

Qasr-E Shirin Area

19. (S/D) Major elements of an Iraqi armored brigade and at least the northernmost elements of a mechanized infantry brigade were still deployed northeast and east of Qasr-E Shirin on [] (Figure 6). Major repositioning of the Iraqi armored brigade had occurred since the last coverage of []. Also, the FEBA had shifted slightly westward because of Iranian repositioning onto higher terrain. The Iraqi armored brigade northeast of Qasr-E Shirin consisted of one tank battalion, one tank company, one tank platoon, five mechanized infantry companies, four mechanized infantry platoons, one FA battery, one AA gun battery, one SA-9 battery (one TEL), and one supply/transport unit. In the armored brigade deployment area, rear echelon Iraqi forces were involved in minor road construction. The mechanized infantry brigade area east of Qasr-E Shirin was only partially imaged. Forces observed included one tank battalion, one tank company, two mechanized infantry companies, one mechanized infantry platoon, two artillery battalions, and three artillery batteries. These two brigades were separated by the Aw-E Quralu River that flows in an east to west direction through the area.

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20. (S/D) The opposing Iranian forces consisting of two M-109A1 SP artillery batteries, a 130mm field gun battery (one gun), and three infantry units were deployed along a ridgeline of the Kuh-E Band Zaedeh mountain, 15 nm east of Qasr-E Shirin in the vicinity of 34-32-35N 045-56-33E. The positioning of these units onto higher ground probably caused the Iraqis to withdraw from their previously held positions. A probable Iranian command post was identified in a small village immediately east of these units. Only one SP battery was observed in this area on [].

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21. (S/D) No significant increases in equipment, new unit arrivals, or further departures were evident at Sar E Pol Zahab Barracks and Brigade Headquarters and Depot [] in early February. Elements of the Iranian armored brigade were still in garrison.

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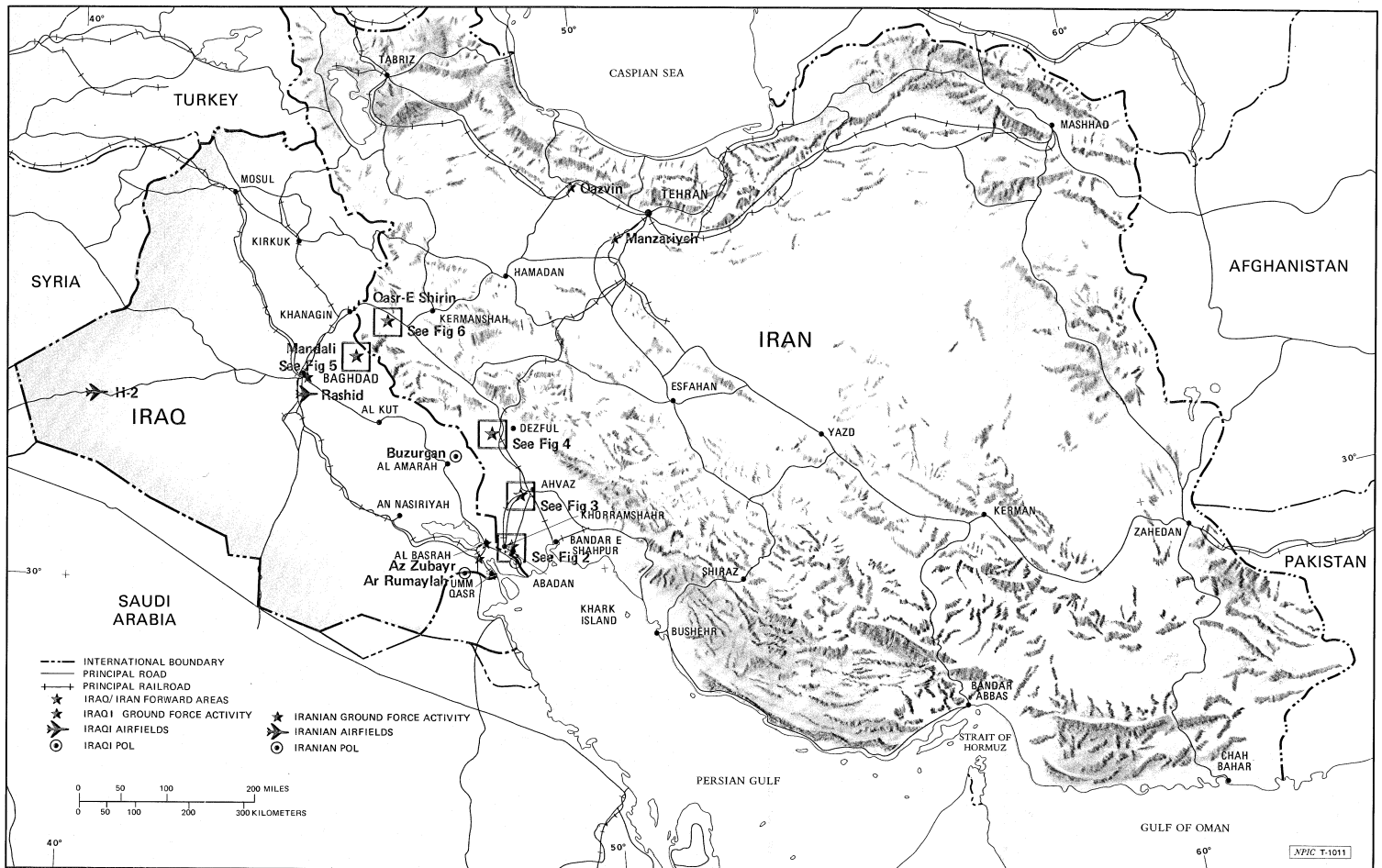


FIGURE 1. IRAQI/IRANIAN MILITARY ACTIVITY



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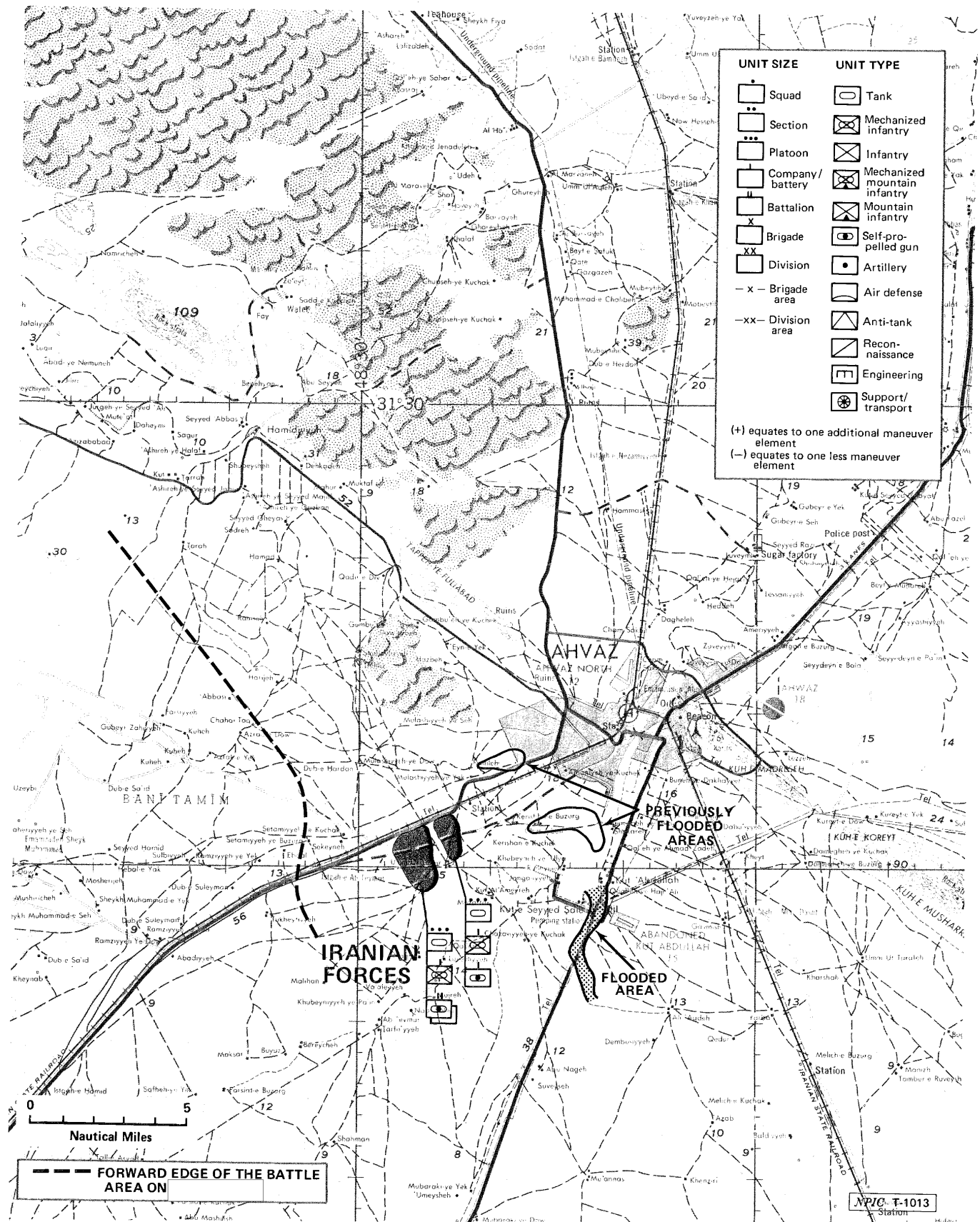


FIGURE 3. GROUND FORCES ACTIVITY, AHVAZ AREA, IRAN, ON

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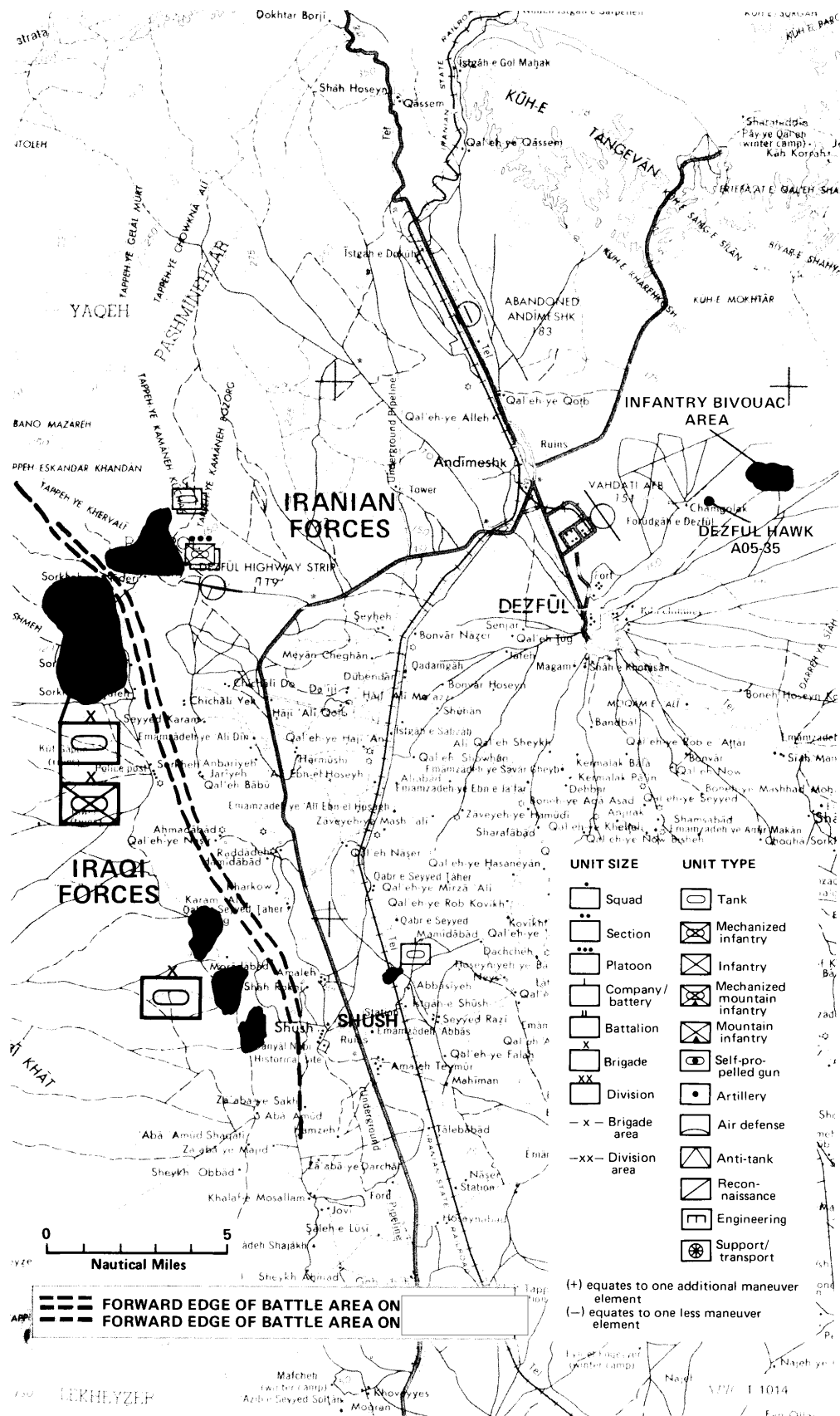


FIGURE 4. GROUND FORCES ACTIVITY, DEZFUL AREA, IRAN, ON



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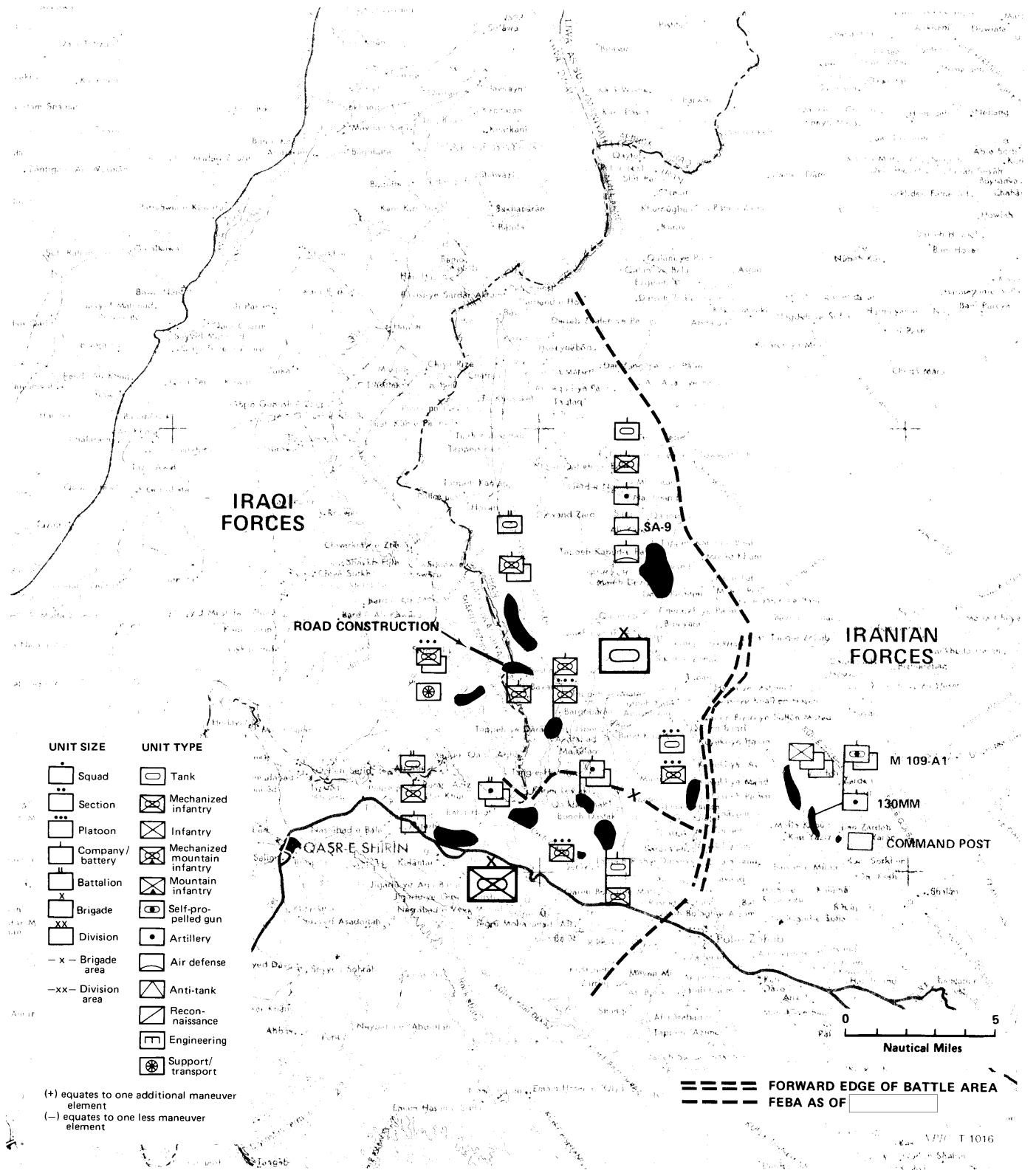


FIGURE 6. GROUND FORCES ACTIVITY, QASR-E SHIRIN AREA, IRAN, ON

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RELATED ACTIVITY

Iraq

22. (S/D) A high level of air defense activity was observed in the Al Basrah, Baghdad, and Umm Qasr areas of Iraq during the reporting period, indicating that the Iraqis continued to fear possible Iranian airstrikes and were attempting to protect their cities and strategic facilities.

23. (S/D) An SA-2 site and an SA-6 site were newly identified in the Al Basrah area on [REDACTED] The SA-2 site, Az Zubayr SA-2 SAM Site [REDACTED] was under construction 19 nm south of Al Basrah at 30-12-55N 047-50-46E. Equipment observed included six missile launchers, six missile transporters, two possible FAN SONG antenna vans, and 12 vehicles/pieces of equipment. The site was not observed on [REDACTED]

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24. (S/D) The SA-6 site was under construction 8 nm southeast of Az Zubayr at 30-16-29N 047-47-51E. Equipment present included three possible SA-6 TELs, three electronics van trailers, and seven vehicles/pieces of equipment. The site was not present on [REDACTED]

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25. (S/D) A second SA-2 site, Baghdad SA-2 East [REDACTED], was under construction 4 nm northeast of Rasheed Airfield [REDACTED]. An alternate site in an early stage of construction was immediately north of the nearly completed site. The site was not present on [REDACTED]

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26. (S/D) SA-2 equipment was also observed for the first time at Baghdad SA-2 Site (BE [REDACTED]) The equipment, which had arrived since [REDACTED] included six SA-2 launchers with missiles, one FAN SONG radar, one unidentified acquisition radar, six SA-2 transporters, two mast-mounted R-400, and one unidentified mast-mounted antenna. The SA-2 equipment was probably moved to this location from Baghdad SAM Site A162 [REDACTED] where SA-2 equipment was removed during the same timeframe.

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27. (S/D) On [REDACTED] a new SA-3 site, Umm Qasr SA-3 SAM Site Northwest [REDACTED] was observed 4 nm northwest of Umm Qasr Port Facilities [REDACTED]. Equipment present consisted of three four-rail SA-3 launchers with missiles, one LOW BLOW radar, and one probable SPOON REST radar. This site was not present on [REDACTED]

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28. (S/D) SA-2 equipment was deployed to Umm Qasr SA-2 Site A33-2 [REDACTED] between [REDACTED] This equipment consisted of six SA-2 launchers, one FAN SONG radar, one SPOON REST radar, and six SA-2 transporters. No SA-2 missiles were observed.

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29. (S/D) Between [REDACTED] the SA-3 equipment was removed from Umm Qasr SA-2 Site A29-2 [REDACTED] and the site is now being used as a SAM support facility. At least 50 SA-2 canisters, at least five SA-3 canisters, seven SA-2 missile transporters, one possible SA-3 missile transporter, five possible SA-2 canister transporters, and seven possible SA-2 oxidizer transporters were observed.

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30. (S/D) SA-3 equipment was also removed from Umm Qasr SA-2 Site A31-2 [REDACTED] between [REDACTED] Only support vehicles remained at the site.

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31. (S/D) Elements of an ECM air defense battalion were field deployed on the northwest edge of Rasheed Airfield at Rasheed ECM Facility [REDACTED] ECM equipment observed included one SQUAT EYE, seven TUB BRICK, and one KING PIN radar jammer. The radar jammers were deployed in net-covered revetments. Elements of this unit were present on [REDACTED] AA defenses observed at this airfield on [REDACTED] included three 37mm AA sites (ten guns) and four light AA sites (ten guns). Additionally, four hardened aircraft bunker parking aprons were net covered between [REDACTED] (Figure 7). At least one unidentified aircraft was parked on one of these aprons on [REDACTED] This camouflage attempt may be related to the arrival in Iraq of four Mirage F-1 aircraft which has recently been reported in the open press.

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32. (S/D) The first deployment of operational aircraft was observed at H-2 Airfield [REDACTED] in western Iraq on partially cloud-covered imagery of [REDACTED] Aircraft observed included one BADGER, one CAMEL, 24 L-29 jet trainers, 10 L-39 jet trainers, one probable L-29, one HOOK, seven HIP, one HOUND, three HIND, and one probable HIP. Only derelict FAGOT/FRESCO aircraft had been observed at this facility in the past.

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33. (S/D) The Iraqis continued to demonstrate a concern for the protection of their POL facilities. Construction of an earthen revetment around the tank farm and the pumping facility at Ar Rumaylah Petroleum Storage and Pumping Station [REDACTED] in southeast Iraq was observed on [REDACTED] (Figure 8). Construction of this revetment had begun since [REDACTED] Construction was also identified at Buzurgan Northern Gas Oil Separation Plant [REDACTED] Construction of an earthen revetment at this facility had begun since [REDACTED] Revetment construction had previously been observed at Kirkuk Petroleum Refinery and Storage [REDACTED] at Rumaila Oil Field Central Gas-Oil Separation Plant [REDACTED] and at Buzurgan Northern Gas Oil Separation Plant.

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34. (S/D) Construction of two additional protective revetments around the Baghdad Nuclear Research Center [REDACTED] was underway on [REDACTED] (Figure 9). A large revetment protecting the eastern portion of the facility was under construction. Activity west of the complex suggested that

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construction on a possible fourth revetment had begun. Construction on the two previously reported revetments appeared to be complete. Since [] portions of the metal screens surrounding the reactor and laboratory areas have been removed. Also netting material has either been removed or has fallen from the metal screens in both areas.

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Iran

35. (S/D) Major elements of the armored brigade housed at Qazvin Barracks and Brigade Headquarters [], headquarters of the Iranian 16th Armored Division, were out of garrison on []. Units out of garrison included two tank battalions (74 tanks), one mechanized infantry battalion (30 APCs), one 155mm M-109A1 SPG battalion (24 M-109A1 SPG), and one heavy-lift battalion. Lead elements of the brigade were reported out of garrison prior to [] the latest coverage prior to [].

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36. (S/D) More than 800 major pieces of military equipment kept in reserve storage at Qazvin Depot and Vehicle Storage Area [] were removed between []. The equipment removed consisted of 529 APCs (276 BM, 178 M-113, 43 BTR-60, 23 M-577, and nine BTR-50), 222 artillery pieces (112 155mm M-109A1 SPG, 39 130mm M-46, two 8-inch M-115, and nine 105mm M-101), and 63 pieces of engineering equipment (16 GSP heavy amphibious ferries, two PMP ponton sets, and 12 BMK-90 powerboats). At least 25 M-109A1 SPG, six 130mm M-46 FA guns, three 105mm M-105 FA guns, approximately 60 heavy-lift transporters, and five GSP were still in garrison. This depot is one of the major reserve equipment storage depots for the Iranian army.

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37. (S/D) On [] two Rapier SAM sites were newly identified on the perimeter of Qom Ammunition Depot Manzariyeh []. Further analysis indicates that the equipment was probably deployed in this area between mid-November and mid-January.

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38. (S/D) Imagery of Abadan Petroleum Refinery NIOC [] revealed that the installation had been extensively damaged and had probably been rendered inoperative (Figure 10). Prior to [] in addition to numerous destroyed/damaged storage tanks, two forced-draft cooling towers (used in association with the steamplant which produces steam for refining units), at least one products treating unit, a probable compressor building, and three storage buildings had been destroyed. Two water purification buildings, which purify water for the steamplant, received fire damage; the roof of one compressor building of a gas processor was damaged; and three storage buildings had been destroyed by that time.

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39. (S/D) Since [] an additional 47 tanks had been destroyed, and approximately 27 had been damaged. Three tanks continued to smoke on [] and by [] four tanks were burning. On [] no tank fires were evident, but three tanks continued to smolder. Extensive damage to pipelines throughout the facility was evident on all dates, and on [] two of the pipelines were on fire. The current capacity of this facility is approximately 8,892,000 barrels, a decrease of 5,540,000 barrels since []. Prewar capacity at this facility was approximately 16,000,000 barrels.

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40. (S/D) Of the total of 140 POL storage tanks at Abadan Petroleum Products Storage and Pumping Station Transshipment Iran I [] at least 97 had been destroyed and 23 damaged by []. This represented an increase of four destroyed tanks since []. A pipeline fire which was burning on [] had been extinguished by []. Pipelines throughout the facility have been damaged extensively. The current capacity of this installation is now approximately 3,878,000 barrels; the prewar capacity of this facility was 14,030,500 barrels.

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Saudi Arabia

41. (S/D) During the reporting period, transshipment activity continued at a high level at Tuwwal Port Facility [] currently a major transshipment point for military materiel bound for Iraq. Numerous merchant ships, including Iraqi Alkindi-class, Bezhitsa/Poltava-class, Rumanian Brad-class, and Kommunist-class, were observed at the quays on various dates throughout the period. A steady flow of military materiel in and out of this port was observed. At least 60 57mm AA guns, 54 ZU 23-2 AAMG, and 200 additional trucks were received between []. By [] only the 57mm AA guns, 30 ZU 23-2 AAMG, and less than 100 trucks remained in port.

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42. (S/D) A large floating crane, which in the past has been involved in offloading military equipment at Tuwwal, was moored adjacent to the small boat repair facility at Juddah Port Facility [] [], approximately 60 nm south of Tuwwal.

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ACRONYMS AND ABBREVIATIONS***This glossary in its entirety is UNCLASSIFIED*

AA	Antiaircraft
AAA	Antiaircraft artillery
AD	Air defense
AOR	Replenishment oiler
APB	Barracks ship
APC	Armored personnel carrier
AR	Repair ship
ARD-D	Floating drydock
ARD-T	Auxiliary repair dock
AW	Air warning
AWT	Water carrier
AX	Training ship
CP	Command post
DD	Destroyer
DDG	Guided missile destroyer
DIW	Dead in the water
ECM	Electronics countermeasure
EW	Early warning
FA	Field artillery
FEBA	Forward edge of battle area
FFG	Guided missile frigate
GCI	Ground controlled intercept
LCMA	Medium landing craft (air cushion)
LCM	Medium landing craft
LCU	Utility landing craft
LSM	Medium amphibious assault landing ship
LST	Amphibious vehicle landing ship
MRL	Multiple rocket launcher
MSC	Coastal minesweeper
MSF	Fleet minesweeper
MSI	Inshore minesweeper
NM	Nautical miles
PB	Patrol boat
PBA	Patrol boat (air cushion)
PBR	River/roadstead patrol boat
PC	Patrol craft
PCL	Small submarine chaser
PCS	Submarine chaser
PG	Patrol escort
PGM	Motor gunboat
PMP	Heavy folding ponton bridge
POL	Petroleum, oil, and lubricant
PT	Torpedo boat
PTG	Missile attack boat
RTP	Rail-to-road transfer point
RO/RO	Roll-on/roll-off
SAM	Surface-to-air missile
SP	Self-propelled
SPAA	Self-propelled antiaircraft
SPG	Self-propelled gun
SSM	Surface-to-surface missile
TEL	Transporter-erector-launcher
TELRL	Transporter-erector-launcher radar
TMM	Truck-mounted bridge
VLCC	Very large crude carrier

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REFERENCES

IMAGERY

(S/D) All applicable satellite imagery acquired from [] was used in the preparation of this report.

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MAPS OR CHARTS

DoD. Joint Operations Graphics, Various Sheets (UNCLASSIFIED, Distribution Restricted)

DOCUMENTS

1. NPIC. Z-20019/81, IAR-0023/81, *Iraq/Iran Military Summary*, [] (S), 10 Feb 81
(SECRET/[])
2. DIA. DDB-1100-IZ-80, *Ground Order of Battle: Iraq (U)*, Jan 80 (SECRET/[])
DIA. DDB-1100-IR-78, *Ground Order of Battle: Iran (U)*, Aug 78 (SECRET/[])

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(S) Comments and queries regarding this report are welcome. They may be directed to the South Asia/Arabia Branch, Third World Forces Division, Imagery Exploitation Group, NPIC, []

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